



# San Francisco Water Power Sewer

Services of the San Francisco Public Utilities Commission

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October 28, 2016

Angela Calvillo  
Clerk of the Board  
1 Dr. Carlton B. Goodlett Place  
City Hall, Room 244  
San Francisco, CA. 94102-4689

Dear Ms. Calvillo:

Please see the enclosed Certificates as required under 2002 Proposition E related to the following bond authorizing legislation:

- Wastewater Enterprise: File No. 160471 and Board of Supervisors Ordinance No. 0111-16

Should you have any questions, please feel free to contact me.

Best regards,

Richard Morales  
Debt Manager  
Tel: 415-551-2973

Edwin M. Lee  
Mayor

Ann Moller Caen  
President

Francesca Vietor  
Vice President

Vince Courtney  
Commissioner

Anson Moran  
Commissioner

Harlan L. Kelly, Jr.  
General Manager



**Certificate of the Consulting Engineers**  
**in connection with Section 8B.124 of the Charter of the City and County of San Francisco and**  
**the Indenture of the San Francisco Public Utilities Commission (SFPUC)**  
**authorizing the Sale of Wastewater Revenue Bonds and / or Other Forms of Indebtedness, including**  
**Commercial Paper**

This Certificate has been prepared by AECOM Technical Services, Inc., (AECOM) at the request of the San Francisco Public Utilities Commission (SFPUC) in support of the SFPUC Wastewater Revenue Bonds and/or Commercial Paper Issuance. AECOM is an independent engineering firm retained by the SFPUC to provide the certification.

Proposition E requires certification by an independent consulting engineer that (i) the Projects to be financed with proceeds of bonds under Proposition E, including the prioritization, scheduling and cost estimates thereof, meet generally accepted utility standards and (ii) that estimated net revenue after payment of operating and maintenance expenses will be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service on the bonds to be issued, and estimated repair and replacement costs.

[Section 3.06(f)(1) of the Indenture, dated as of January 1, 2003, as amended and supplemented (the "Indenture"), by and between the SFPUC and U.S. Bank National Association, requires a Certificate of a Consulting Engineer (as defined under the Indenture) setting forth (i) the estimated completion date for the portion of the Project for which the series of Bonds is being issued and for any other uncompleted portion of the Project, and (ii) an estimate of the cost construction of such Project and any other uncompleted portion of the Project.]

Section A below includes projects in the following categories: Sewer System Improvement Program, Renewal and Replacement, Treasure Island, and Wastewater Facilities and Infrastructure, and certifies that (i) the anticipated projects to be financed by the proposed Revenue Bonds and/or Commercial Paper Notes (the "Notes") including the prioritization, cost estimates and scheduling, meet generally accepted utility standards and (ii) that estimated net revenue after payment of operating and maintenance expenses will be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service on the bonds to be issued, and estimated repair and replacement costs. Section B below certifies that the estimated net revenue after payment of operating and maintenance expenses and estimated repair and replacement costs, should be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service requirements on the Notes under the proposed plan of finance, as well as debt service on all Parity and Senior Wastewater obligations.

The findings and conclusions in this Certificate are based on AECOM's review of the following references and data:

- Wastewater Enterprise Capital Improvement Program Quarterly Report – (Q2, FY2015-16), dated March 1, 2016.
- Sewer System Improvement Program Phase 1.

- Wastewater Enterprise Revenue Bonds and Other Forms of Indebtedness – FY 2016-17 and FY 2017-18 Capital Improvement Projects (Attachment A).
- Wastewater Enterprise FY 2016-17 and FY 2017-18 Capital Improvement Program (Attachment B).
- Wastewater Enterprise Financial Projections, Qualified Independent Consultant Report, dated May 31, 2016 (Attachment C)
- Discussions with SFPUC staff.

1. Based upon its review of the Documents and in reliance on the information presented in the Documents and in reliance upon conversations and representations of SFPUC staff, the undersigns undersigned certifies that the Projects , including prioritization, cost estimates, and scheduling, meet generally accepted utility standards.

2. Based upon its review of the Documents and in reliance on the information presented in the Documents and in reliance upon conversations and representations of SFPUC staff, the undersigned certifies that estimated net revenue after payment of operating and maintenance expenses will be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service on the bonds to be issued, and estimated repair and replacement costs.

3. The Documents contain information about the current status of the Projects, including estimated completion dates and the cost of completion of such Projects. Such estimated completion dates and costs of construction referenced in 3.06(f)(1). All Projects being funded by Notes or Bonds are scheduled for completion by 2026.

4. The cost estimates contained in the Documents, including budgeted costs of each Project, appear reasonable.

5. The Engineer has reviewed the methodology used by the Commission to develop the information presented in the Documents, and based upon such review, certifies that the methodology is reasonable, provided the methodology is consistently applied to all Projects.

While developing the Certificate, AECOM reviewed the references and data and consulted with SFPUC staff. This Certification of the CIP is based on the information provided by the SFPUC. The conclusions, observations, and recommendations contained herein constitute only the opinions of AECOM. The various background documents, statements, and other information supplied by the SFPUC, its employees, and other consultants have been relied upon as being accurate in the performance of these analyses; however, no assurances are given nor warranties implied by AECOM as to the accuracy of such information. AECOM makes no certification and gives no assurances except as explicitly set forth in this document.

#### **Wastewater Enterprise Program Description**

The responsibilities of the SFPUC's Wastewater Enterprise are to manage, operate, and maintain San Francisco's wastewater collection and treatment system. This is accomplished through four separate but related programs:

- Sewer System Improvement Program
- Renewal and Replacement
- Treasure Island
- Wastewater Facilities and Infrastructure

#### *Sewer System Improvement Program (SSIP)*

The SFPUC has embarked on a comprehensive \$6.976 billion Sewer System Improvement Program to be implemented over approximately twenty (20) years. The SSIP is a series of major capital improvement projects that are intended to bring the City's wastewater and stormwater collection system into a state of good repair, and meet levels of service goals originally endorsed by the Commission in 2012 with revisions endorsed in March 2016.

The SSIP capital projects address specific challenges and deficiencies facing the Wastewater Enterprise, enhance system reliability and flexibility, improve operational and seismic reliability, and address present and future regulatory compliance. The SSIP projects also consider environmental benefits, sustainability, and community benefits in addressing long-term wastewater needs. However, the SFPUC is not subject to any consent decree requiring specific improvements. The implementation of the SSIP projects is being phased over a twenty (20) year period in an effort to maintain ratepayer affordability and minimize impacts throughout the City.

On August 28, 2012, after a series of three public SSIP workshops, the SFPUC Commission officially endorsed the projects in the \$6.933 billion 20-year SSIP and the associated Goals and Level of Service (LOS). The endorsed Goals include:

- Provide a compliant, reliable, resilient, and flexible system that can respond to catastrophic events;
- Integrate green and grey infrastructure to manage stormwater and minimize flooding;
- Provide benefits to impacted communities;
- Modify the system to adapt to climate change;
- Achieve economic and environmental sustainability; and
- Maintain ratepayer affordability.

The scope of the endorsed SSIP is divided into two major project types, namely, treatment plant projects and collection system projects.

On March 22, 2016, the Commission affirmed the above Goals and adopted a baseline SSIP Phase 1 budget of \$2.9 billion and overall program budget of \$6.976 billion.

#### *Renewal and Replacement (R&R)*

The Wastewater Enterprise undertakes renewal and replacement projects to improve performance or extend the service life of an existing asset. These projects are typically annual ongoing projects and fall into two categories: Renewal and Replacement Collection System and Renewal and Replacement Treatment Plants.

The Renewal and Replacement Collection System category includes the following projects: Condition Assessment projects to clean, video inspect, as well as perform condition assessment of sewer facilities;

Sewer Improvement projects to maintain the existing functionality of the collection system and repair and replacement of structurally inadequate sewers; Spot Sewer Replacement projects which consist of as-needed replacement of localized failed sections of existing sewer facilities; Hydraulic Improvement projects to upgrade sewers with hydraulic deficiencies; and, Salt Water Intrusion projects to prevent San Francisco Bay water from entering the wastewater collection system, which can be detrimental to the treatment plant's biological system and result in corrosion of exposed metal.

The Renewal and Replacement Treatment Plant Improvements includes projects to extend the useful life of the Wastewater Enterprise treatment facility assets.

Priority lists are maintained for both collection and treatment projects, with collection system projects identified using an Asset Management approach which considers the current condition of the section in question and applicable risks of failure.

#### *Treasure Island (TI)*

Treasure Island and Yerba Buena Island, located in San Francisco Bay between San Francisco and Oakland, are served by a wastewater system that currently relies on pumping to convey wastewater to a secondary facility for treatment and discharge. The Treasure Island treatment plant is currently owned by the United States Navy, but operated and maintained by the Wastewater Enterprise pursuant to a cooperative agreement with the Navy. However, the SFPUC expects to eventually expand its service area to include Treasure Island (see “– Wastewater Treatment – Contract Services”). In connection with such expansion, the SFPUC anticipates constructing a new treatment plant with additional capacity and associated infrastructure in order to meet the needs at full build-out of the proposed conversion of the former Treasure Island Naval Station to residential and commercial uses, although agreements for the provision and construction of the treatment plant have not yet been finalized. The projected costs for this project are included in the SFPUC's Ten-Year Capital Plan.

The Treasure Island and Yerba Buena Island wastewater collection system consists of 10 miles of sewers and 29 wastewater pump stations. In addition, a stormwater collection system includes 6 stormwater pump stations and a number of shallow water outfalls. With the exception of any new treatment plant constructed by the SFPUC, the SFPUC expects that the developer undertaking the conversion project will construct all other new wastewater infrastructure relating to the development, including collection facilities, prior to transferring such facilities to the SFPUC.

#### *Wastewater Facilities and Infrastructure (WF&I)*

There are three projects in the category of Wastewater Facilities and Infrastructure: (i) the Ocean Beach Protection Project, (ii) the Southeast Community Facility and (iii) the Islais Creek Outfall.

The Ocean Beach Protection Project will facilitate the development of a comprehensive shoreline management and protection plan in partnership with relevant stakeholders and regulatory agencies to provide a long-term solution to the erosion issue along Ocean Beach between Sloat and Skyline Boulevard, in an effort to protect the integrity of critical SFPUC wastewater assets that are jeopardized by the ongoing shoreline erosion and to mitigate potential impacts to the Lake Merced Tunnel and other critical wastewater assets at this location. Such assets include the Lake Merced Transport Tunnel, the Westside Pump Station, the Westside Transport, and the Oceanside Plant.

The Southeast Community Facility was originally built in the 1980s as a community mitigation measure for expansion of the Southeast Plant with the purpose of providing opportunities for residents in the Bayview Hunters Point community to participate in education programs, to establish and expand daycare opportunities and to provide information and resources for the enhancement and growth of the community as a whole. The Southeast Community Facility Project will focus on improving the functional and operational reliability of the facility to ensure it fulfills its goals of providing education and job training needs of the community. Infrastructure improvements/development will be provided. The project will include evaluation of programming and siting of the community facility and associated green houses.

The Islais Creek Outfall Project will replace the effluent pipelines within Islais Creek and rehabilitate the existing upstream, on-shore pipelines, booster pump station pump manifold and isolation valves. This project was included in the capital program following a determination by the SFPUC in 2015 that one of the two pipelines had extensive corrosion and a risk of pipeline failure would continue to exist until the issue could be addressed.

#### **SECTION A: CERTIFICATION OF SSIP, R&R, TI, AND WF&I**

AECOM's review of the references and data for Section A included a "programmatic approach" such that AECOM certifies that the revenue bonds and/or commercial paper proceeds are intended to be used by the SFPUC to fund the capital projects included in the Wastewater Enterprise's SSIP, R&R, TI, and WF&I Programs included in this revenue bonds and/or commercial paper program. Projects may be moved on or off the CIP list, delayed or accelerated as necessary due to scheduling, budgeting, or other constraints.

Based upon our analysis and review of the data and analysis provided by the SFPUC, AECOM certifies that the projects to be financed by the revenue bonds and/or commercial paper program, as identified in the Wastewater Enterprise's SSIP, R&R, TI, and WF&I Programs including the prioritization, cost estimates and scheduling, meet generally accepted utility standards.

#### **SECTION B: CERTIFICATION OF BOND REQUIREMENTS**

Bartle Wells Associates conducted a financial analysis evaluating the adequacy of revenues generated by the SFPUC Wastewater Enterprise to meet annual operating and debt service coverage requirements. The financial analysis was developed based on updated financial data provided by SFPUC, other relevant information, independent calculations of debt service corresponding with the SFPUC's projected wastewater financing needs, and consultations with Financial Services staff.

A 10-year financial projection for the SFPUC Wastewater Enterprise has been developed through FY 2025-26 and is presented in Table 1 of the Wastewater Financial Projections (WWFP). As shown in Table 1, wastewater service charges are projected to be the major source of revenues to cover debt service. Cash Flow Assumptions underlying the financial projections are detailed on page 3 of the WWFP.

Based upon our analysis and review of the data and analysis provided by the SFPUC, Bartle Wells Associates certifies that estimated net revenue after payment of operating and maintenance expenses

will be sufficient to meet debt service coverage and other indenture or resolution requirements (including, specifically, Sections 3.05 and 6.13 of the Indenture), including debt service on the bonds to be issued, and estimated repair and replacement costs.

In the opinion of Bartle Wells Associates, the projected wastewater service charges should provide revenue sufficient to:

- Meet projected costs of operations, maintenance, and routine replacement of sewer system facilities.
- Meet debt service obligations on existing and projected debt, including proposed Revenue Bonds, State Revolving Fund Loans, and/or other financings..
- Provide sufficient revenue to finance the costs of projected sewer system capital improvements through FY 2025-26.
- Meet debt service coverage, additional debt test, and reserve requirements on outstanding and projected debt under the Indenture.
- Meet all other obligations of the SFPUC including charges, liens, or encumbrances on or payable from revenues of the sewer enterprise.

Schedule I hereto sets forth (i) the estimated completion date for the portion of the Project for which the series of Bonds is being issued and for any other uncompleted portion of the Project, and (ii) an estimate of the cost construction of such Project and any other uncompleted portion of the Project.

The complete financial analysis and list of assumptions is included in the aforementioned WWFP.

Dated this 24<sup>th</sup> day of October , 2016

AECOM Technical Services, Inc.

By: 

Derrick Wong, P. E.  
Assoc. Vice President



Attachment A  
Wastewater Enterprise Revenue Bonds and Other Forms of Indebtedness  
FY 2016-17 and FY 2017-18 Capital Improvement Projects

Attachment B  
Wastewater Enterprise FY 2016-17 and FY 2017-18 Capital Improvement Program

Attachment C  
Wastewater Financial Projections

**SCHEDULE I**

**Estimated Completion Date and Cost of Construction of Project**

Project	Amount (FY 16-17 & 17-18)	Completion Date
CWWSIPPRPL00 SSIP - Program Wide Management	12,000,000	7/31/2023
CWWSIPPRPL00 SSIP – Land Reuse	28,108,000	2/1/2019
CWWSIPDP00 Biosolids Digester Facilities Project	347,528,000	5/1/2025
CWWSIPSE02 Southeast Plant-New Headworks (Grit) Replacement	110,625,000	12/29/2023
CWWSIPSE00 Southeast Plant Improvement	101,314,000	8/31/2023
CWWSIPTPNP North Point Facility (NPF)	57,287,000	12/31/2020
CWWSIPTPOP00 Oceanside Treatment Plant (OSP) Improvements	86,309,000	4/15/2022
CWWSIPCT00 Central Bayside System Improvements	38,069,000	6/30/2017
CWWSIPCS00 Collection System Improvements – Interceptors/Tunnels/Odor Control	4,407,000	4/9/2020
CWWSIPCSSR Collection System Improvements – Interdepartmental Projects		1/24/2023
CWWSIPCSPS00 Pump Stations/Bayside & Westside	20,105,000	1/21/2021
CWWSIPCSCD00 Reliability Program - Collection System – Combined Sewer Discharge	7,738,000	12/20/2019
CWWSIPFR00 Flood Resilience/Hydraulic Improvements	29,214,000	5/31/2017
CWWSIPFCDB Green Infrastructure Projects	2,478,000	12/21/2021
CWWSIPFCRP00 Advanced Rainfall/Operating Decision System	1,299,000	6/29/2018
CWWRNRCS00 Collection System and Treatment Plant Improvements	95,450,000	3/31/2017
CWP11001 Treasure Island	20,463,000	2020
CWWFAC-01 Ocean Beach Protection Project	6,000,000	2020
CWWFAC-03 Southeast Community Center Improvements	10,000,000	2021
CWWFAC04 Islais Creek Outfall	15,000,000	2018



**SCHEDULE II**

**Estimates of Revenues, Operation and Maintenance Costs and Net Revenues**

**(This information is contained in the Water Financial Projections)**

**[Note: the estimates/projections need to specify whether and to what extent Revenues include available fund balances, as well as if the underlying rate increases are adopted or just assumed]**



San Francisco  
**Water**  
**Power**  
**Sewer**



# **Wastewater Financial Projections**

## **Qualified Independent Consultant Report**

**May 31, 2016**



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

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## **SFPUC Wastewater Enterprise Financial Projections**

### **List of Tables**

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Table 1 - SFPUC Wastewater Cash Flow Projections

Table 2 - 10-Year Capital Improvement Program

Table 3 - Outstanding Debt Service

Table 4 - Estimated Bond Debt Service

Table 5 - Projected Debt Service

Table 6 - Projected Debt Service on Future Financings

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Table 1 - SFPUC Wastewater Cash Flow Projections

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
<b>ASSUMPTIONS</b>											
Projected Rate Increases	5.0%	7.0%	9.0%	13.0%	13.0%	13.0%	13.0%	13.0%	12.0%	9.0%	6.0%
Change in Wastewater Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Interest Earnings Rate	0.5%	0.5%	1.0%	1.0%	1.5%	1.5%	2.0%	2.0%	2.0%	2.0%	2.0%
Salary & Benefit Cost Escalator	-	-	-	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
O&M Cost Escalator	-	-	-	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
<b>Beginning Fund Reserves</b>	121,246,000	124,348,000	140,705,000	177,627,000	193,106,000	193,333,000	173,714,000	148,149,000	161,323,000	130,022,000	121,090,000
<b>REVENUES</b>											
Sewer Service Charges	250,007,000	267,507,000	291,583,000	329,489,000	372,300,000	420,700,000	475,400,000	537,200,000	601,700,000	655,900,000	695,300,000
Interest Income	800,000	622,000	1,407,000	1,776,000	2,897,000	2,900,000	3,474,000	2,963,000	3,226,000	2,600,000	2,422,000
Other/Miscellaneous	4,604,000	1,335,000	1,375,000	1,416,000	1,458,000	1,502,000	1,547,000	1,593,000	1,641,000	1,690,000	1,741,000
Capacity Fees	7,500,000	5,000,000	5,000,000	5,000,000	5,000,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
<b>Total</b>	<b>262,911,000</b>	<b>274,464,000</b>	<b>299,365,000</b>	<b>337,681,000</b>	<b>381,655,000</b>	<b>427,602,000</b>	<b>482,921,000</b>	<b>544,256,000</b>	<b>609,067,000</b>	<b>662,690,000</b>	<b>701,963,000</b>
Debt Proceeds/Project Funding	331,454,000	738,767,000	230,136,000	763,258,000	1,114,455,000	833,067,000	467,641,000	206,982,000	269,274,000	297,022,000	266,772,000
<b>EXPENSES</b>											
<b>Operating &amp; Maintenance</b>											
Salaries & Benefits	63,600,000	68,299,000	70,575,000	72,692,000	74,873,000	77,119,000	79,433,000	81,816,000	84,270,000	86,798,000	89,402,000
Non-Personnel Services	16,800,000	17,113,000	17,287,000	17,806,000	18,340,000	18,890,000	19,457,000	20,041,000	20,642,000	21,261,000	21,899,000
Materials & Supplies	10,500,000	10,301,000	10,444,000	10,757,000	11,080,000	11,412,000	11,754,000	12,107,000	12,470,000	12,844,000	13,229,000
Equipment	2,000,000	990,000	1,000,000	1,030,000	1,061,000	1,093,000	1,126,000	1,160,000	1,195,000	1,231,000	1,268,000
Light/Heat/Power	9,700,000	9,735,000	10,529,000	10,845,000	11,170,000	11,505,000	11,850,000	12,206,000	12,572,000	12,949,000	13,337,000
Services of Other Bureaus	29,900,000	27,768,000	28,373,000	29,224,000	30,101,000	31,004,000	31,934,000	32,892,000	33,879,000	34,895,000	35,942,000
Services of Other Depts	25,500,000	23,438,000	23,438,000	24,141,000	24,865,000	25,611,000	26,379,000	27,170,000	27,985,000	28,825,000	29,690,000
Programmatic Projects (Net of Lease)	4,822,000	3,766,000	3,858,000	3,911,000	3,987,000	4,066,000	4,146,000	4,229,000	4,269,000	4,269,000	4,269,000
Incremental O&M for SSIP	0	0	0	0	0	0	0	0	0	0	0
Subtotal	162,822,000	161,410,000	165,504,000	170,406,000	175,477,000	180,700,000	186,079,000	191,621,000	197,282,000	203,072,000	209,036,000
<b>Debt Service (Net of Cap I &amp; Reimbs)</b>											
2010A Bonds	2,276,000	9,038,000	9,042,000	9,042,000	9,040,000	9,041,000	9,041,000	0	0	0	0
2010B Bonds	7,200,000	7,204,000	7,204,000	7,204,000	7,204,000	7,204,000	7,204,000	14,369,000	14,360,000	14,352,000	14,343,000
2013A Bonds	36,109,000	18,103,000	16,341,000	16,398,000	16,486,000	16,557,000	15,095,000	13,496,000	664,000	673,000	1,285,000
2013B Bonds	14,428,000	14,428,000	14,428,000	14,428,000	14,428,000	14,428,000	14,428,000	14,428,000	23,042,000	23,034,000	22,424,000
2016A Bonds	0	0	0	9,078,000	10,646,000	10,646,000	10,646,000	10,646,000	15,984,000	15,988,000	16,018,000
2016B Bonds	0	0	0	2,559,000	3,001,000	3,001,000	3,001,000	3,001,000	4,507,000	4,508,000	4,513,000
2016 SRF Loan	0	0	0	314,000	314,000	314,000	314,000	314,000	314,000	314,000	314,000
Projected Debt Service (Net of Cap I)	0	0	0	39,849,000	65,908,000	98,406,000	157,085,000	227,475,000	268,086,000	287,888,000	306,236,000
Subtotal	60,013,000	48,773,000	47,015,000	98,872,000	127,027,000	159,597,000	216,814,000	283,729,000	326,957,000	346,757,000	365,133,000
<b>Non-Operating</b>											
Repair & Replacements (Pay-Go)	41,000,000	43,000,000	45,000,000	48,000,000	74,000,000	102,000,000	100,669,000	50,808,000	111,205,000	116,869,000	122,815,000
R&R (Pay-Go) Capacity Fee Funded	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
525GG Lease	2,424,000	2,424,000	2,424,000	2,424,000	2,424,000	2,424,000	2,424,000	2,424,000	2,424,000	2,424,000	2,424,000
Subtotal	45,924,000	47,924,000	49,924,000	52,924,000	78,924,000	106,924,000	105,593,000	55,732,000	116,129,000	121,793,000	127,739,000
<b>Total Expenses</b>	<b>268,759,000</b>	<b>258,107,000</b>	<b>262,443,000</b>	<b>322,202,000</b>	<b>381,428,000</b>	<b>447,221,000</b>	<b>508,486,000</b>	<b>531,082,000</b>	<b>640,368,000</b>	<b>671,622,000</b>	<b>701,908,000</b>
<b>Debt Financed Capital Projects</b>	331,454,000	738,767,000	230,136,000	763,258,000	1,114,455,000	833,067,000	467,641,000	206,982,000	269,274,000	297,022,000	266,772,000
Transfers In	8,950,000										
<b>Revenues Less Expenses</b>	3,102,000	16,357,000	36,922,000	15,479,000	227,000	(19,619,000)	(25,565,000)	13,174,000	(31,301,000)	(8,932,000)	55,000
<b>Ending Fund Reserves</b>	124,348,000	140,705,000	177,627,000	193,106,000	193,333,000	173,714,000	148,149,000	161,323,000	130,022,000	121,090,000	121,145,000
<b>Net Revenues</b>	100,089,000	113,054,000	133,861,000	167,275,000	206,178,000	246,902,000	296,842,000	352,635,000	411,785,000	459,618,000	492,927,000
<b>Net Revs + Available Fund Reserves</b>	221,335,000	237,402,000	274,566,000	344,902,000	399,284,000	420,616,000	444,991,000	500,784,000	541,807,000	580,708,000	614,017,000
<b>Debt Service Coverage (w/o Rsvs)</b>	1.67	2.32	2.85	1.69	1.62	1.55	1.37	1.24	1.26	1.33	1.35
<b>Debt Svc Covg (with Fund Reserves)</b>	3.69	4.87	5.84	3.49	3.14	2.64	2.05	1.77	1.66	1.67	1.68

## SFPUC Wastewater Financial Projections

### Cash Flow Assumptions

SFPUC Model Basis	FY16 Wastewater Ten Year Plan FY2016-26 Q2 V1
Projected Rate Increases	Wastewater rate increases independently projected by BWA as shown on the table.
Wastewater Sales	The projections are based on SFPUC estimates for FY 2015/16 and assume no change in the volume of future wastewater sales.
Beginning Fund Reserves	Beginning fund reserves on June 30, 2015 based on SFPUC estimates.
Sewer Service Charges	Based on SFPUC revenue projections for FY 2015/16 escalating to account for projected rate increases and changes in projected wastewater sales, if any.
Interest Income	Interest earnings starting FY 2016/17 are estimated based on the projected interest rate multiplied by beginning fund reserves for each year.
Other Miscellaneous Income	Based on SFPUC projections.
Capacity Fees	Includes placeholder estimates assuming higher levels of growth through 2019/20.
Operation & Maintenance Expenses	Based on SFPUC projections through FY 2017/18 and subsequently escalate at the annual rate of 3.0% thereafter.
Capital Projects	Based on SFPUC projections.
Debt Financing/Project Funding	Based on SFPUC projections assuming debt is issued each year to meet annual funding needs identified in the SFPUC's Ten Year Plan.
Debt Service Assumptions	Debt assumptions are shown on Tables 4 and 5. Table 4 calculates debt service per \$100 million of project funding and Table 5 applies these estimates to each projected debt issue. Key assumptions include: a) 30-year terms, b) 5% or 3.5% average annual interest rate, c) debt issuance on Jan-1 with Apr-1 and Oct-1 payment dates, d) capitalized interest for 1.25 years, e) principal payments amortized over 28 years starting year 3, f) level annual debt service, and g) no debt service reserve fund.
Annual Debt Service	Future debt service is based on BWA projections as shown in Table 6.
Other Non-Operating Expenses	Based on SFPUC projections.
Net Revenues	Net Revenues equal total annual Revenues (excluding debt proceeds) less annual Operating and Maintenance Expenses.
Debt Service Coverage (w/o Reserves)	Coverage based on annual Net Revenues (excluding available fund reserves) divided by total annual debt service.
Debt Service Coverage (with Fund Reserves)	Based on the same calculation described above, with Net Revenues increased to account for the lowest of either beginning or ending fund reserves each year.

## SFPUC Wastewater Projected Revenues & Expenses

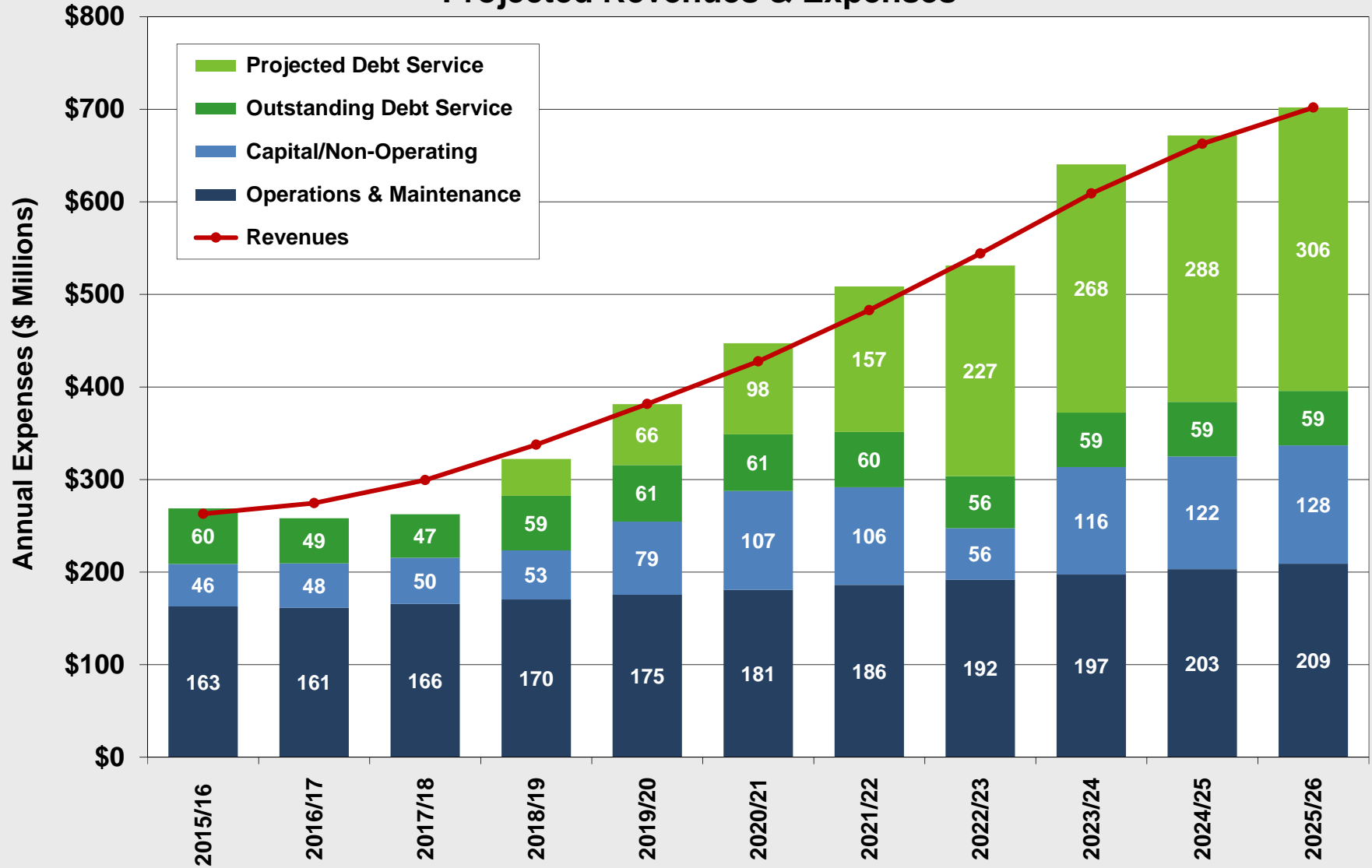


Table 2  
 SFPUC Wastewater Enterprise  
 10-Year Capital Improvement Program  
*Includes Construction Cost Inflation*

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
<b>Capital Improvement Program Costs</b>											
Sewer System Improvement Program (SSIP)											
Program Wide & Land Reuse	53,253,000	34,108,000	6,000,000	16,500,000	16,500,000	16,500,000	16,500,000	12,500,000	11,500,000	11,500,000	11,500,000
Treatment Facilities	270,861,000	130,055,000	573,008,000	506,841,000	377,977,000	192,752,000	127,452,000	110,289,000	201,605,000	137,005,000	100,661,000
Sewer/Collection System	74,500,000	0	70,319,000	426,764,000	348,036,000	27,528,000	42,770,000	52,414,000	48,863,000	89,004,000	61,813,000
Stormwtr Mgmt/Flood Control	23,670,000	11,758,000	21,233,000	58,724,000	14,320,000	205,336,000	20,260,000	39,071,000	35,054,000	29,263,000	35,736,000
Renewal & Repl, Collection	77,988,000	83,600,000	86,333,000	89,765,000	89,766,000	93,352,000	85,663,000	89,927,000	94,404,000	99,103,000	104,036,000
Renewal & Repl, Treatment	13,063,000	13,715,000	14,402,000	15,121,000	15,878,000	16,673,000	17,506,000	18,381,000	19,301,000	20,266,000	21,279,000
Treasure Island	0	0	20,463,000	22,240,000	21,090,000	0	0	0	0	0	0
Wastewater Facils & Infrastr	23,300,000	12,000,000	19,000,000	29,000,000	26,000,000	20,000,000	0	0	0	0	0
<b>Total</b>	<b>536,635,000</b>	<b>285,236,000</b>	<b>810,758,000</b>	<b>1,164,955,000</b>	<b>909,567,000</b>	<b>572,141,000</b>	<b>310,151,000</b>	<b>322,582,000</b>	<b>410,727,000</b>	<b>386,141,000</b>	<b>335,025,000</b>
<b>Funding Sources</b>											
New Debt Funding	482,635,000	230,136,000	763,258,000	1,114,455,000	833,067,000	467,641,000	206,982,000	269,274,000	297,022,000	266,772,000	209,710,000
Annual Revenues	41,000,000	43,000,000	45,000,000	48,000,000	74,000,000	102,000,000	100,669,000	50,808,000	111,205,000	116,869,000	122,815,000
Capac Fees/Other	13,000,000	12,100,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
<b>Total</b>	<b>536,635,000</b>	<b>285,236,000</b>	<b>810,758,000</b>	<b>1,164,955,000</b>	<b>909,567,000</b>	<b>572,141,000</b>	<b>310,151,000</b>	<b>322,582,000</b>	<b>410,727,000</b>	<b>386,141,000</b>	<b>335,025,000</b>
<b>Surplus / (Shortfall)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 3  
SFPUC Wastewater Enterprise  
Outstanding Debt Service

Fiscal Year Ending June 30	2010A Bonds	2010B Bonds			2013A Bonds	2013B Bonds	2016A Bonds			2016B Bonds			2016 SRF (Preliminary)	Total Net
		Gross	Reimbs	Net			Bonds	Cap I	Net	Bonds	Cap I	Net		
2016	2,276,200	10,685,426	(3,485,586)	7,199,840	36,108,500	14,428,000								60,012,540
2017	9,037,825	10,685,426	(3,481,846)	7,203,580	18,102,500	14,428,000	9,078,459	(9,078,459)	0	2,559,229	(2,559,229)	0		48,771,905
2018	9,042,075	10,685,426	(3,481,846)	7,203,580	16,340,800	14,428,000	10,645,750	(10,645,750)	0	3,001,050	(3,001,050)	0		47,014,455
2019	9,042,100	10,685,426	(3,481,846)	7,203,580	16,398,300	14,428,000	10,645,750	(1,567,291)	9,078,459	3,001,050	(441,821)	2,559,229	314,000	59,023,667
2020	9,040,000	10,685,426	(3,481,846)	7,203,580	16,486,175	14,428,000	10,645,750		10,645,750	3,001,050		3,001,050	314,000	61,118,555
2021	9,040,750	10,685,426	(3,481,846)	7,203,580	16,557,300	14,428,000	10,645,750		10,645,750	3,001,050		3,001,050	314,000	61,190,430
2022	9,040,500	10,685,426	(3,481,846)	7,203,580	15,094,550	14,428,000	10,645,750		10,645,750	3,001,050		3,001,050	314,000	59,727,430
2023		17,796,166	(3,426,693)	14,369,473	13,495,800	14,428,000	10,645,750		10,645,750	3,001,050		3,001,050	314,000	56,254,073
2024		17,673,662	(3,313,458)	14,360,203	664,175	23,042,125	15,983,875		15,983,875	4,507,425		4,507,425	314,000	58,871,803
2025		17,545,666	(3,193,547)	14,352,119	672,600	23,034,250	15,988,000		15,988,000	4,508,175		4,508,175	314,000	58,869,144
2026		17,408,913	(3,065,894)	14,343,019	1,285,200	22,424,000	16,017,900		16,017,900	4,513,450		4,513,450	314,000	58,897,569
2027		17,261,893	(2,930,008)	14,331,885		23,707,875	16,047,675		16,047,675	4,524,475		4,524,475	314,000	58,925,910
2028		17,110,033	(2,786,028)	14,324,005		23,708,125	16,046,300		16,046,300	4,522,475		4,522,475	314,000	58,914,905
2029		16,943,973	(2,634,163)	14,309,810		23,709,625	16,048,175		16,048,175	4,520,850		4,520,850	314,000	58,902,460
2030		16,772,303	(2,473,952)	14,298,351		23,706,000	16,047,425		16,047,425	4,524,225		4,524,225	314,000	58,890,001
2031		16,593,293	(2,304,833)	14,288,460		23,705,750	16,048,175		16,048,175	4,522,350		4,522,350	314,000	58,878,735
2032		16,397,827	(2,125,463)	14,272,364		23,707,125	16,044,550		16,044,550	4,524,975		4,524,975	314,000	58,863,014
2033		16,194,233	(1,936,928)	14,257,305		23,708,375	16,045,550		16,045,550	4,521,850		4,521,850	314,000	58,847,080
2034		15,983,646	(1,741,227)	14,242,419		23,711,700	16,045,050		16,045,050	4,522,725		4,522,725	314,000	58,835,894
2035		15,765,202	(1,538,078)	14,227,124		23,712,500	16,046,925		16,046,925	4,522,225		4,522,225	314,000	58,822,774
2036		15,542,896	(1,327,153)	14,215,743		23,707,700	16,045,050		16,045,050	4,524,975		4,524,975	314,000	58,807,468
2037		15,306,552	(1,106,766)	14,199,786		23,706,300	16,048,175		16,048,175	4,525,600		4,525,600	314,000	58,793,861
2038		15,055,150	(876,585)	14,178,564		23,712,000	16,046,300		16,046,300	4,524,700		4,524,700	314,000	58,775,564
2039		14,801,539	(637,538)	14,164,000		23,703,800	16,048,300		16,048,300	4,523,400		4,523,400	314,000	58,753,500
2040		14,534,555	(389,246)	14,145,309		23,705,600	16,047,000		16,047,000	4,522,000		4,522,000	314,000	58,733,909
2041		14,258,181	(131,376)	14,126,804		23,706,000	16,046,700		16,046,700	4,525,200		4,525,200	314,000	58,718,704
2042							37,820,700		16,046,600	4,522,800		4,522,800	314,000	58,704,100
2043							37,821,600		16,045,900	4,524,600		4,524,600	314,000	58,706,100
2044									16,048,700	4,525,300		4,525,300	314,000	20,888,000
2045									16,044,200	4,524,700		4,524,700	314,000	20,882,900
2046									16,046,500	4,522,600		4,522,600	314,000	20,883,100
2047									16,044,600	4,523,700		4,523,700	314,000	20,882,300
2048													314,000	314,000



Table 4  
 SFPUC Wastewater Enterprise  
 Estimated Bond Debt Service  
 Per \$100 Million of Project Funding

<b>Funding Source</b>		<b>Bonds</b>	<b>Bonds &amp; SRF</b>
<b>Repayment Term</b>		30 Years	30 Years
<b>Cap I Term</b>		1.25 Years	1.25 Years
<b>Funding Target</b>		\$100,000,000	\$100,000,000
<b>Assumed Issuance &amp; Payment Dates</b>			
Bond Issuance Date		Jan-1	Jan-1
First Interest Payment		Apr-1	Apr-1
Principal & Second Interest Payment		Oct-1	Oct-1
<b>Total Debt Issue</b>		\$107,870,000	\$105,740,000
<b>Project Funding</b>		\$100,000,000	\$100,000,000
<b>Issuance Costs &amp; Reserve Requirement</b>			
Underwriter Discount	0.75%	\$809,000	\$793,000
Issuance Costs	Est.	300,000	300,000
Reserve Requirement		0	0
Capitalized Interest*		6,743,000	4,626,000
Rounding/Contingency		<u>18,000</u>	<u>21,000</u>
Total		7,870,000	5,740,000
<b>Financing Terms</b>			
Term (Years)		30	30
Interest Only (Years)		1.25	1.25
Principal Amortization (Years)		28	28
Est. Average Interest Rate		5.00%	3.50%
<b>Annual Debt Service</b>			
Interest Only Period		5,394,000	3,701,000
Principal Amortization Period		7,241,000	5,985,000

\* Assumes Cap I funds annual interest payments for 2 years.  
 Financing costs and interest rates estimated for financial planning purposes.

**Table 5**  
**SFPUC Wastewater Enterprise**  
**Projected Debt Service**

<b>Debt Issuance by FY</b>	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>	<b>2023/24</b>	<b>2024/25</b>	<b>2025/26</b>
<b>Financing Terms</b>	Bonds	Bonds	Bonds/SRF	Bonds/SRF	Bonds	Bonds	Bonds	Bonds	Bonds	Bonds
CIP Project Funding Target	738,767,000	230,136,000	763,258,000	1,114,455,000	833,067,000	467,641,000	206,982,000	269,274,000	297,022,000	266,772,000
Total Issue Size	796,910,000	248,250,000	807,070,000	1,178,420,000	898,630,000	504,440,000	223,270,000	290,470,000	320,400,000	287,770,000
Issuance Date	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Issuance Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Interest Payments	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1
Principal Payments (Year 3+)	Oct-1	Oct-1	Oct-1	Oct-1	Oct-1	Oct-1	Oct-1	Oct-1	Oct-1	Oct-1
Average Interest Rate	5.0%	5.0%	3.5%	3.5%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Repayment Term (Years)	30	30	30	30	30	30	30	30	30	30
Capitalized Interest (Years)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
<b>Debt Service per \$100M</b>										
Interest Only Period	5,394,000	5,394,000	3,701,000	3,701,000	5,394,000	5,394,000	5,394,000	5,394,000	5,394,000	5,394,000
Principal Amort Period	7,241,000	7,241,000	5,985,000	5,985,000	7,241,000	7,241,000	7,241,000	7,241,000	7,241,000	7,241,000
<b>Annual Debt Service</b>										
Interest Only Period	39,849,000	12,414,000	28,248,000	41,246,000	44,936,000	25,225,000	11,165,000	14,525,000	16,021,000	14,390,000
Principal Amort Period	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000
<b>Cumulative MADS</b>	<b>53,494,000</b>	<b>70,158,000</b>	<b>115,839,000</b>	<b>182,539,000</b>	<b>242,861,000</b>	<b>276,723,000</b>	<b>291,711,000</b>	<b>311,209,000</b>	<b>332,716,000</b>	<b>352,033,000</b>

Table 6  
 SFPUC Wastewater Enterprise  
 Projected Debt Service on Future Financings

Fiscal Year Ending June 30	2017 Bonds	2018 Bonds	2019 Bonds/SRF	2020 Bonds/SRF	2021 Bonds	2022 Bonds	2023 Bonds	2024 Bonds	2025 Bonds	2026 Bonds	Total Net of Cap I
2017	Cap I (3 mos)										0
2018	Cap I	Cap I (3 mos)									0
2019	39,849,000	Cap I	Cap I (3 mos)								39,849,000
2020	53,494,000	12,414,000	Cap I	Cap I (3 mos)							65,908,000
2021	53,494,000	16,664,000	28,248,000	Cap I	Cap I (3 mos)						98,406,000
2022	53,494,000	16,664,000	45,681,000	41,246,000	Cap I	Cap I (3 mos)	Cap I (3 mos)				157,085,000
2023	53,494,000	16,664,000	45,681,000	66,700,000	44,936,000	Cap I	Cap I (3 mos)	Cap I (3 mos)			227,475,000
2024	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	25,225,000	Cap I	Cap I (3 mos)	Cap I (3 mos)		268,086,000
2025	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	11,165,000	Cap I	Cap I (3 mos)		287,888,000
2026	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	14,525,000	Cap I	Cap I (3 mos)	306,236,000
2027	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	16,021,000	Cap I	327,230,000
2028	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	14,390,000	347,106,000
2029	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2030	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2031	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2032	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2033	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2034	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2035	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2036	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2037	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2038	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2039	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2040	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2041	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2042	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2043	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2044	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2045	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2046	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2047	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2048	53,494,000	16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	352,033,000
2049		16,664,000	45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	298,539,000
2050			45,681,000	66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	281,875,000
2051				66,700,000	60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	236,194,000
2052					60,322,000	33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	169,494,000
2053						33,862,000	14,988,000	19,498,000	21,507,000	19,317,000	109,172,000
2054							14,988,000	19,498,000	21,507,000	19,317,000	75,310,000
2055								19,498,000	21,507,000	19,317,000	60,322,000
2056									21,507,000	19,317,000	40,824,000
2057										19,317,000	19,317,000



# SAN FRANCISCO PLANNING DEPARTMENT

Certificate of City and County of San Francisco Planning Department Regarding Proposed Sale of Wastewater Revenue Bonds and / or Other Forms of Indebtedness, including Commercial Paper, as has been authorized by the Board of Supervisors pursuant to Ordinances 93-10 and 115-12, with a combined not to exceed issuance amount of \$1,112, 601,280 for Capital Projects budgeted in Fiscal Years 2016-17 to 2017-18

I, Sarah B. Jones, Environmental Review Officer of the Planning Department of the City and County of San Francisco (the Planning Department), hereby certify as follows:

1. As the Environmental Review Officer (ERO) of the Planning Department, I am authorized to certify as to the compliance of the San Francisco Public Utilities Commission (SFPUC) with applicable requirements of the California Environmental Quality Act. (CEQA).
2. After consultation with the SFPUC, I understand that the SFPUC proposes to sell Wastewater Revenue Bonds and / or other forms of Indebtedness (the "Revenue Indebtedness") to finance certain improvements to the Wastewater Enterprise of the City and County of San Francisco (the "City"). The improvements proposed for financing include those projects described in the following document, attached to this Certificate as Exhibit A and may represent a subset of the total available authorization
3. I understand that Section 8B.124 of the City Charter grants authority to the City's Board of Supervisors to approve the issuance of Revenue Indebtedness, including revenue bonds and commercial paper, by ordinance upon two-thirds vote of its members and under certain conditions. The two ordinances related to the debt issuance, 93-10 and 115-12, are attached hereto as Exhibit B (the Ordinances.)
4. I understand that one of the conditions to the Board of Supervisor's authorization of such Revenue Indebtedness is the delivery of a certificate of the Planning Department regarding the projects or additional to be financed under the authorization provided in Exhibit B, the Ordinances
5. The San Francisco Planning Commission certifies Environmental Impact Reports as they are completed pursuant to CEQA. In addition, the Planning Department approves Initial Study/Mitigated Negative Declarations, and the ERO approves Categorical Exemptions.
6. Based on a preliminary review of the Projects, and discussions with the SFPUC regarding the requirements for undertaking such additional Projects, I certify that the Projects under the jurisdiction of the SFPUC to be funded with proceeds of the Revenue Indebtedness, as described in the Ordinances, (a) comply with applicable requirements of CEQA, or (b) are not considered to be projects under CEQA at this time and will comply with CEQA if and when they *are* defined. Pursuant to the provisions of Chapter 31 of the San Francisco Administrative Code, any additional Project to be financed will comply with such applicable requirements prior to any draw on any Revenue Indebtedness proceeds to finance the acquisition or construction of such facilities.

In witness whereof, the undersigned has executed this certification as of this 17 day of May, 2016

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EXHIBIT A  
WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS  
FY 2016-2017 AND FY 2017-2018 CAPITAL IMPROVEMENT PROJECTS

<b>Program</b>	<b>Project Number</b>	<b>Project Title</b>	<b>CEQA Compliance</b>
Sewer System Improvement Program (SSIP)	CWWSIPRPL00	SSIP - Program Wide Management	Source Funding, not a “project” under CEQA §15378, Individual projects will be subject to CEQA compliance,
SSIP	CWWSIPRPL00	SSIP – Land Reuse	Categorical Exemption Determination issued October 28, 2015 for acquisition and relocation of Central Shops and Asphalt Plant from 1800 Jerrold Avenue and 1801 Jerrold Avenue adjacent to Southeast Plant
SSIP	CWWSIPDP00	Biosolids Digester Facilities Project	Preparation of an Environmental Impact Report (EIR) is in process
SSIP	CWWSIPSSE02	Southeast Plant- New Headworks (Grit) Replacement	Preparation of a Mitigated Negative Declaration (MND) is in process, Final MND scheduled for issuance December 2016

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SSIP	CWWSIPSE00	Southeast Plant Improvement	<p>SEP Oxygen Generation Plant – A categorical exemption determination was issued August 23, 2012.</p> <p>SEP Oxygen Generation Plant 01 – Issuance of a categorical exemption determination is anticipated.</p> <p>SEP Existing Digester Roof Repairs – An emergency statutory exemption concurrence was received April 19, 2013.</p> <p>SEP Primary and Secondary Clarifiers Upgrades - A categorical exemption determination was issued on August 17, 2015.</p> <p>SEP 521/522 and Disinfection Upgrades – A categorical exemption determination was issued August 18, 2015.</p> <p>SEP Facility Wide DCS Control Upgrades - Planning and Design Phases only, not a “project” under CEQA §15378.</p> <p>SEP Seismic Reliability and Condition Assessment – A categorical exemption determination was issued March 25, 2016.</p> <p>SEP Existing Digester Gas Handling Improvements – A categorical exemption determination was issued January 29, 2016.</p> <p>SEP Power Feed and Primary Switchgear Upgrade – Issuance of A categorical exemption determination is anticipated for this project by December 2016.</p>
SSIP	CWWSIPTPNP	North Point Facility (NPF)	<p>North Shore Wet Weather Pump Station Improvement and Disinfection – Planning and Design Phases only, not a “project” under CEQA §15378.</p> <p>NPF Outfall System Rehabilitation – A categorical exemption was issued September 18, 2015.</p>

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SSIP	CWWSIPTPOP00	Oceanside Treatment Plant (OSP) Improvements	<p>OSP Digester Gas Utilization Upgrade - Issuance of a categorical exemption determination is anticipated in December 2016.</p> <p>OSP Condition Assessment Repairs - Planning and Design Phases only, not a “project” under CEQA §15378.</p> <p>OSP Odor Control Optimization - Planning and Design Phases only, not a “project” under CEQA §15378.</p> <p>Westside PS Reliability Improvements - Planning and Design Phases only, not a “project” under CEQA §15378; Preparation of an MND is anticipated.</p>
SSIP	CWWSIPCT00	Central Bayside System Improvements	<p>Planning and Design Phases only, not a “project” under CEQA §15378, Initiation of preparation of an Environmental Impact Report (EIR) for CEQA compliance is anticipated.</p>

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SSIP	CWWSIPCS00	Collection System Improvements – Interceptors/Tunnels/Odor Control	<p>As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations or MNDs.</p> <p>Collection System Condition Assessment – It is anticipated this project will qualify for an exemption determination or a “not a project” determination.</p> <p>Kansas and Marin Streets Sewer Improvements – A categorical exemption determination was issued April 21, 2015.</p> <p>Drumm and Jackson Streets Sewer System Improvement – Issuance of a categorical exemption determination is anticipated by October 2016.</p> <p>Cargo Way Sewer Box Odor Reduction – Issuance of a categorical exemption determination is anticipated by August 2017.</p> <p>Rutland Sewer Improvements – A Mitigated Negative Declaration was issued April 5, 2010 under the Sunnydale Sewer Improvement Project.</p> <p>SSIP Sewer Improvement Projects - It is anticipated this project will qualify for an exemption determination.</p>



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SSIP	CWWSIPCSSR	Collection System Improvements – Interdepartmental Projects	<p>Van Ness Bus Rapid Transit (BRT) Sewer Improvements – The San Francisco County Transportation Authority issued a Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) June 27, 2013.</p> <p>Better Market Street Sewer Improvements - Planning and Design Phases only, not a “project” under CEQA §15378; The San Francisco Planning Department issued an initial study March 30, 2016; Subsequent environmental review will be required once the preferred project alternative (including utility improvements) is selected.</p> <p>Geary BRT Sewer Improvements Phase 1 - Issuance of a categorical exemption determination is anticipated by October 2016.</p> <p>Central Subway Sewer Improvements – The San Francisco County Transportation Authority issued a Final EIR/EIS in 2008.</p> <p>Mission Bay Loop Sewer Improvements – A court challenge is currently in process to the CEQA document for this project; the construction contract is on hold.</p> <p>Masonic Avenue Sewer Improvements – A categorical exemption determination was issued December 18, 2014.</p> <p>Geary BRT Sewer Improvements Phase 2 - Planning and Design Phases only, not a “project” under CEQA §15378; Initiation of environmental review in January 2017.</p> <p>Taraval Sewer Improvements - Initiation of environmental review in July 2016, Issuance of an exemption determination is anticipated.</p>

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SSIP	CWWSIPCSPS00	Pump Stations/Bayside & Westside	<p>As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations or MNDs.</p> <p>Hudson Avenue Pump Station and Outfall Improvements – Initiation of environmental review in November 2016.</p> <p>Force Main Rehab at Embarcadero and Jackson –Anticipate issuance of a categorical exemption determination by July 2016.</p> <p>Mariposa Dry Weather Pump Station &amp; Force Main – Anticipate issuance of a categorical exemption determination by October 2017.</p> <p>Cesar Chavez Pump Station – Environmental review has not been initiated; Issuance of a categorical exemption determination is anticipated.</p> <p>Marin Street Sewer Replacement – A categorical exemption determination was issued October 5, 2015.</p> <p>Griffith Pump Station Improvements - Environmental review has not been initiated; Issuance of a categorical exemption determination is anticipated.</p>

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SSIP	CWWSIPCSCD00	Reliability Program - Collection System – Combined Sewer Discharge (CSD) Structures and Transport/Storage Boxes	<p>As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations or MNDs.</p> <p>Richmond Transport/Storage Tunnel Rehabilitation – Environmental review has not been initiated; Issuance of a categorical exemption determination in November 2016 is anticipated.</p> <p>Beach and Sansome Streets CSD Rehabilitation - Environmental review has not been initiated; Issuance of a categorical exemption determination in March 2017 is anticipated.</p> <p>CSD Backflow Prevention and Monitoring - Planning and Design Phases only, not a “project” under CEQA §15378; Environmental review has not been initiated.</p> <p>5<sup>th</sup>, North 6<sup>th</sup> and Division Streets CSD Rehabilitation - Planning and Design Phases only, not a “project” under CEQA §15378; Environmental review has not been initiated.</p>

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SSIP	CWWSIPFR00	Flood Resilience/Hydraulic Improvements	<p>As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations or MNDs.</p> <p>17<sup>th</sup> and Folsom Wet Weather Storage – Planning and Design Phases only, not a “project” under CEQA §15378.</p> <p>Flood Resilience Analysis (Planning Phase Only) and Flood Resilience – Early Projects (Planning Phase Only) - Planning and Design Phases only, not a “project” under CEQA §15378.</p> <p>Wawona St and 15<sup>th</sup> Ave Stormwater Detection - Planning and Design Phases only, not a “project” under CEQA §15378; Environmental review has not been initiated, Issuance of a categorical exemption determination is anticipated in June 2017.</p> <p>Cayuga Avenue Stormwater Detention - Planning and Design Phases only, not a “project” under CEQA §15378; Environmental review has not been initiated, Issuance of a categorical exemption determination is anticipated in June 2017.</p> <p>Folsom Area Stormwater Improvement - Planning and Design Phases only, not a “project” under CEQA §15378; Environmental review has not been initiated, Preparation of a categorical exemption request or an MND is anticipated.</p> <p>17<sup>th</sup> and Folsom Permanent Barriers - Environmental review has not been initiated, Issuance of a categorical exemption determination is anticipated in October 2016.</p> <p>Hydraulic and Drainage Sewer Improvements - As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations.</p>

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SSIP	CWWSIPFCDB	Green Infrastructure Projects	<p>Islais Creek Green Infrastructure – Environmental review was completed for the Infrastructure Project under the Final MND for the Mission District Streetscape Project.</p> <p>Sunset Green Infrastructure – A categorical exemption determination was issued December 5, 2014.</p> <p>North Shore Green Infrastructure – A categorical exemption determination was issued October 6, 2015.</p> <p>Lake Merced Green Infrastructure – A categorical exemption determination was issued August 28, 2014.</p> <p>Sunnydale Green Infrastructure – A categorical exemption determination was issued August 28, 2014.</p> <p>Richmond Green Infrastructure – A categorical exemption determination was issued June 4, 2015.</p> <p>Yosemite Green Infrastructure – Issuance of a categorical exemption determination is anticipated in June 2017.</p> <p>Channel Green Infrastructure – A categorical exemption determination was issued.</p>
SSIP	CWWSIPFCRP00	Advanced Rainfall/Operating Decision System	<p>A draft MND for issuance by the Planning Department is being prepared; Compliance with the National Environmental Policy Act (NEPA) will also be required with the National Oceanic and Atmospheric Administration (NOAA) acting as the NEPA lead agency; It is anticipated preparation of an Environmental Assessment (EA) will be required under NEPA.</p>
Renewal and Replacement (R&R)	CWWNRCS00	Collection System	<p>As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations.</p>
Capital	CWP11001	Treasure Island	<p>Final Environmental Impact Report Certified June 7, 2011, No further CEQA compliance required.</p>

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Capital	CWWFAC-01	Ocean Beach Visioning Process	Planning and Design Phases only, not a “project” under CEQA §15378; A Local Coastal Program Amendment is currently in process at the San Francisco Planning Department.
Capital	CWWFAC-03	Southeast Community Center Improvements	Planning and Design Phases only, not a “project” under CEQA §15378; As the individual projects are defined, the appropriate CEQA compliance document will be prepared.
Capital	CWWFAC04	Islais Creek Outfall	Preparation of an MND is in process.